

REMARKS

In the office action, Claims 1-4 stand rejected under 35 USC 103(a) as being unpatentable over Lin US Patent No. 6 813 412 in view of Nishiyama et al. US Patent 6 169 826. This rejection is respectfully traversed. By the foregoing amendment, Claims 1-4 are cancelled. The rejection should therefore be considered moot and its withdrawal is respectfully requested. New claims 5-11 are presented for examination.

Lin '412 discloses an optical switch that is quite different from the present invention as fully described in the background of the present specification, paragraphs [0002] to [0004]. Lin's device provides a plurality of movable elements that comprise a reflecting surface. Each movable element is rotatable into and out of the path of an incident optical signal, within a plane positioned at an angle to the direction of the incident signal. The reflected output optical signal is further deflected at an angle to the reflecting surface. Lin '412 does not disclose a fixed-side member for movably supporting the movable member in the X-direction and a Y-direction, perpendicular to the Z-direction of the input signal, and drive means for driving the movable member in the X-direction and the Y-direction, nor does Lin disclose a clamp mechanism provided with a pushing member for switching between a clamped state in which the movable member is pressed along the Y-direction and fixed to the fixed-side member, and an unclamped state in which the pressing of the movable member along the Y-direction is released, as required by Claim 5. Lin '412 further does not disclose a pushing member that is supported on the fixed-side member in a manner that it can swing along the Y-direction, the movable member being disposed between the pushing member and the fixed-side member along the Y-direction on one side of a swing center of the pushing member, and the clamping magnetic drive circuit being disposed between the pushing member and the fixed-side member on the

other side of the swing center thereof, and the clamping magnet and the clamping coil being disposed so as not to stack along the Y-direction, as required by Claim 8.

Nishiyama et al. '826 discloses an optical switch in which a movable body, holder, permanent magnet, and electromagnetic coils are disposed on the same plane, namely on the base plate. Nishiyama fails to teach or suggest that a pushing member is used to clamp the moving body. It also fails to teach or suggest that the magnets and coils are disposed on the different members and that they are arranged so as not to stack along the Y-direction, i.e. along the moving direction of the pushing member.

According to the present invention, the pushing member is moved along the Y-direction between the clamping state and the unclamped state of the movable body, and the clamping coil and the clamping magnets are disposed so as to not stack along the Y-direction. The clamping coil and clamping magnets are not stacked in the height direction of the device, so that the optical switch device can be made thinner in a reliable manner, as described in the paragraphs [0049] and [0050] of the specification.

The movable member is moved along the Y and X directions at the same time when the movable member is released. With this movement, the movable member can be moved to the next positioning point within a short period in comparison with a case in which the movable member is released along the Y direction and then moved to the next position point along the X direction.

In light of the foregoing, the claims remaining in the application should be considered in condition for allowance, and early Notice of Allowability is courteously solicited. If necessary to further prosecution of the application, the Examiner is invited.

Respectfully submitted,

  
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